

DETAILED ACTION

Election/Restrictions

Applicant's election of Group I (claims 3, 4, 11-13, 17, 18 and 21-26) and a method of treating head and neck cancer comprising administering a compound of formula III and 4-[1-ethyl-7-(piperidin-4-yloxy)-1H-imidazo[4,5-c]pyridin-2-yl]-furan-3-ylamine in the reply filed on November 28, 2007 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)).

The requirement is still deemed proper and is therefore made **FINAL**.

Claims 7, 8, 14-17, 19, 20, 22- 26 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention/species, there being no allowable generic or linking claim.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 3, 4, 11-13 and 18 are rejected under 35 U.S.C. § 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The specification discloses chemicals, such as compounds of formula III (p. 6),

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which meet the written description and enablement provisions of 35 USC 112, first paragraph. However, claim(s) 3, 4, 11-13 and 18 are directed to solvates of the compound of formula III, which only correspond in some undefined way to specifically instantly disclosed chemicals. None of these solvates meet the written description provision of 35 USC § 112, first paragraph, due to lacking chemical structural information for what they are and chemical structures are highly variant and encompass a myriad of possibilities. The specification provides insufficient written description to support the genus encompassed by the claim.

Vas-Cath Inc. v. Mahurkar, 19 USPQ2d 1111, makes clear that "applicant must convey with reasonable clarity to those skilled in the art that, as of the filing date sought, he or she was in possession of *the invention*. The invention is, for purposes of the 'written description' inquiry, *whatever is now claimed*." (See page 1117.) The specification does not "clearly allow persons of ordinary skill in the art to recognize that [he or she] invented what is claimed." (See Vas-Cath at page 1116.)

With the exception of the above specifically disclosed chemical structures, the skilled artisan cannot envision the detailed chemical structure of the encompassed solvates regardless of the complexity or simplicity of the method of isolation. Adequate written description requires more than a mere statement that it is part of the invention and reference to a potential method for isolating it. The chemical structure itself is required. See Fiers v. Revel, 25 USPQ2d 1601, 1606 (CAFC 1993) and Amgen Inc. V. Chugai Pharmaceutical Co. Ltd., 18 USPQ2d 1016. In Fiddes v. Baird, 30 USPQ2d 1481, 1483, claims directed to mammalian FGF's were found unpatentable due to lack

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of written description for the broad class. The specification provided only the bovine sequence. Finally, University of California v. Eli Lilly and Co., 43 USPQ2d 1398, 1404, 1405 held that:

...To fulfill the written description requirement, a patent specification must describe an invention and do so in sufficient detail that one skilled in the art can clearly conclude that "the inventor invented the claimed invention." *Lockwood v. American Airlines, Inc.*, 107 F.3d 1565, 1572, 41 USPQ2d 1961, 1966 (1997); *In re Gosteli*, 872 F.2d 1008, 1012, 10 USPQ2d 1614, 1618 (Fed. Cir. 1989) ("[T]he description must clearly allow persons of ordinary skill in the art to recognize that [the inventor] invented what is claimed."). Thus, an applicant complies with the written description requirement "by describing the invention, with all its claimed limitations, not that which makes it obvious," and by using "such descriptive means as words, structures, figures, diagrams, formulas, etc., that set forth the claimed invention." *Lockwood*, 107 F.3d at 1572, 41 USPQ2d at 1966.

Therefore, only the above chemically structurally defined chemicals, but not the full breadth of the claim(s) meet the written description provision of 35 USC § 112, first paragraph. The species specifically disclosed are not representative of the genus because the genus is highly variant. Applicant is reminded that Vas-Cath makes clear that the written description provision of 35 USC § 112 is severable from its enablement provision. (See page 1115.)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 3, 4, 11-13, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lackey et al (WO 02/056912) in view of Bailey et al (WO 03/080610).

Claims 3, 4, 11-13, 18 and 21 are drawn to a method of treating head and neck cancer comprising administering a compound of formula III and the Akt inhibitor 4-[1-ethyl-7-(piperidin-4-yloxy)-1 H-imidazo[4,5-c]pyridin-2-yl]-furan-3-ylamine.

Lackey et al teaches a method of treating human head and neck cancer (p. 1, lines 20-25), comprising administering a compound of formula III (claims 1 and 5) in its monohydrate or anhydrous ditosylate salt form (p. 5, lines 20-26) and a signal transduction pathway inhibitor (claim 15). Lackey et al does not teach the use of 4-[1-

ethyl-7-(piperidin-4-yloxy)-1 H-imidazo[4,5-c]pyridin-2-yl]-furazan-3-ylamine as a specific signal transduction pathway inhibitor.

Bailey et al teaches that 4-[1- ethyl-7-(piperidin-4-yloxy)-1 H-imidazo[4,5-c]pyridin-2-yl]-furazan-3-ylamine (p. 148, Example 285) is a single transduction pathway inhibitor useful in the treatment of cancer (p. 4, lines 5-7). Therefore, it would have been obvious for one of ordinary skill in the art at the time of the instantly claimed invention to use the known single transduction pathway inhibitor, 4-[1- ethyl-7-(piperidin-4-yloxy)-1 H-imidazo[4,5-c]pyridin-2-yl]-furazan-3-ylamine, in the method of Lackey et al, thus resulting in the practice of the instant invention with a reasonable expectation of success.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CHRISTOPHER R. STONE whose telephone number is (571)270-3494. The examiner can normally be reached on Monday-Thursday, 7:30am-4:00pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ardin H. Marschel can be reached on (571) 272-0718. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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/Ardin Marschel/

Supervisory Patent Examiner, Art Unit 1614